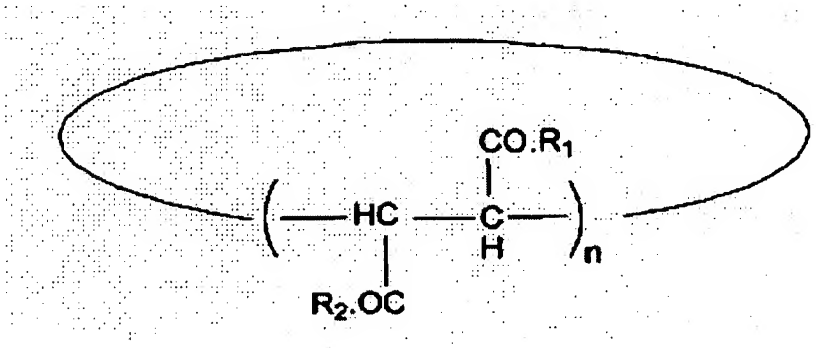
AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-4 (Canceled)

5. (Currently amended) An ~~carbocyclic fumaric acid~~ oligomer ~~according to claim 1 or 2~~ of the following formula (I)



wherein the radicals R_1 and R_2 are the same or different and each occurrence of radicals R_1 and R_2 is independently [[are]] ~~selected~~ chosen from ~~the group consisting of~~ amine radicals (-NR_3R_4), amino acid radicals (-NH-CH(COOH)-R_6), peptide radicals having from 2 to 100 amino acids, alcohol radicals (-OR_5) and a hydroxyl radical,

n is an integer from ~~between~~ 2 ~~and~~ to 10,

the radicals R_3 and R_4 are the same or different and are independently chosen ~~selected~~ from ~~the group consisting of~~ hydrogen, C_{1-24} alkyl radicals, ~~the~~ a phenyl radical and C_{6-10} aralkyl radicals,

the radical R_5 is chosen ~~selected~~ from ~~the group consisting of~~ hydrogen, C_{1-24} alkyl radicals, ~~the~~ a phenyl radical and C_{6-10} aralkyl radicals,

and the radical R_6 represents the side chain of a natural or synthetic amino acid, provided that when R_1 and R_2 are alcohol radicals ($-OR_5$) and R_5 is a methyl radical, then n is not 2, further provided that when R_1 and R_2 are hydroxyl radicals, then n is not 3, and even further provided that when R_1 is an amine radical ($-NR_3R_4$), R_3 is a hydrogen, R_4 is a C_{6-10} aralkyl radical, and R_2 is hydrogen, then n is not 2.

6. (Canceled)

7. (Currently amended) An oligomer according to claim 5 ~~or 6~~, wherein the radicals R_3, R_4, and R_5 are the same or different and are independently chosen ~~selected from the group consisting of~~ hydrogen, methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, t-butyl, pentyl, cyclopentyl, 2-ethyl hexyl, hexyl, cyclohexyl, heptyl, cycloheptyl, octyl, vinyl, allyl, 2-hydroxyethyl, 2-hydroxypropyl, [[or]] 3-hydroxypropyl, 2,3-dihydroxypropyl, 2-methoxyethyl, methoxymethyl, ~~and~~ 2-methoxypropyl, and [[or]] 3-methoxypropyl.

8. (Currently amended) An oligomer according to claim 5 ~~or 6~~ wherein R_1 represents an amine radical and each occurrence of R_2 ~~represents an~~ is independently chosen from ~~alkoxy~~ alcohol radicals ($-OR_5$) and a hydroxyl radical [[or -OH]].

9. (Currently amended) An oligomer according to claim 5 ~~or 6~~ wherein each occurrence of R_1 and R_2 ~~each independently~~ is independently chosen from alcohol radicals ($-OR_5$) and ~~represent an alkoxy radical or~~ a hydroxyl radical.

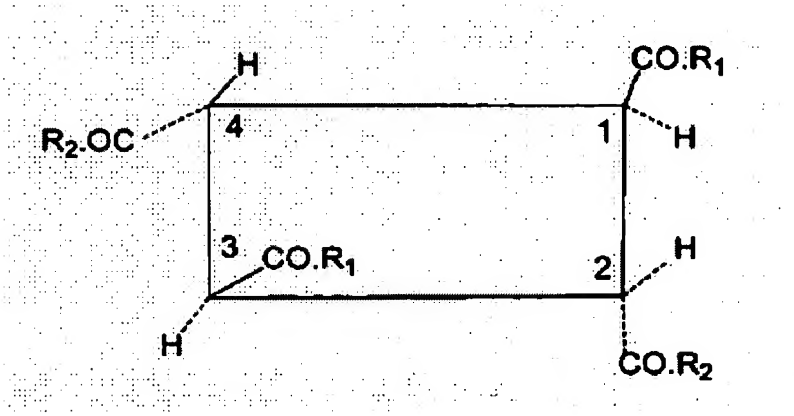
10. (Currently amended) An oligomer according to claim 9 wherein each occurrence of R_1 and R_2 [[are]] is independently chosen ~~selected~~ from ~~the group consisting of~~ methoxy, ethoxy, propoxy, isopropoxy, n-butoxy, sec-butoxy, tert-butoxy, phenoxy, and pentoxy.

11. (Original) An oligomer according to claim 9 wherein R_1 and R_2 are both methoxy.

12. (Currently amended) An ~~carbocyclic or oxacarbocyclic~~ oligomer according to ~~any of the previous claims~~ claim 5, wherein n is 2 or 3, each occurrence of radicals R_1 and R_2 is independently chosen from alcohol radicals ($-OR_5$), and R_5 is a C_{1-24} alkyl radical ~~containing 2 to 3 dialkyl fumarate units derived from fumaric acids and/or esters and amides thereof~~.

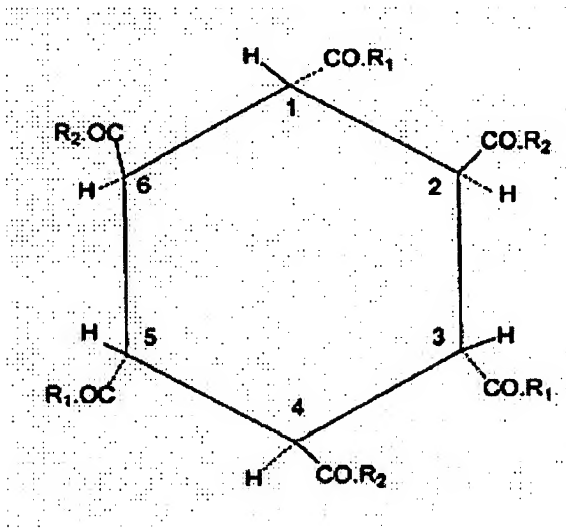
13. (Currently amended) An ~~carbocyclic~~ oligomer according to ~~any of the previous claims~~ claim 12 wherein ~~all of~~ the carbonyl groups carrying the radicals R_1 and R_2 are arranged as substituents in the trans position to each adjacent substituent.

14. (Currently amended) An ~~carbocyclic~~ oligomer according to claim 5 represented by the formula (II)



~~wherein R_1 and R_2 are as defined in claim 5.~~

15. (Currently amended) An ~~carbocyclic~~ oligomer according to claim 5 represented by the formula (III)



~~wherein R_1 and R_2 are as defined in claim 5.~~

Claims 16-19 (Canceled)

20. (Currently amended) A pharmaceutical preparation ~~containing~~comprising an ~~fumaric acid~~ oligomer according to claim 5 ~~any of the claims 1 to 17~~ and at least one excipient.

21. (Original) A pharmaceutical preparation according to claim 20, said pharmaceutical preparation being available in a form suitable for oral, rectal, transdermal, dermal, ophthalmological, nasal, pulmonary or parenteral application.

22. (Currently amended) A pharmaceutical preparation according to claim 20, said pharmaceutical preparation being present in the form of tablets, coated tablets, capsules, granulate, solutions for drinking, liposomes, nano-particles, nano-capsules, micro-capsules, micro-tablets, pellets, [[or]] powders, ~~as well as~~ granulate filled in capsules, micro-tablets filled in capsules, pellets filled in capsules, nano-particles filled in capsules or powder filled in capsules.

23. (Currently amended) A pharmaceutical preparation according to claim 22, said pharmaceutical preparation being present in the form of nano-particles, micro-pellets or micro-tablets ~~which, optionally, may be filled in sachets or capsules~~.

24. (Currently amended) A pharmaceutical preparation according to claim 22 wherein the solid oral dosage forms ~~are provided with~~ further comprise an enteric coating.

25. (Currently amended) A pharmaceutical preparation according to any of the claims 20 to 24 which contains an amount of ~~fumaric acid~~ an oligomer corresponding to 10 to 500 mg of fumaric acid.

26. (Currently amended) A method ~~The use according to any of the claims 19 to 20~~ for preparing a pharmaceutical preparation comprising admixing an oligomer according to claim 5 with at least one excipient.

~~(1) for the therapy of an autoimmune disease selected from the group consisting of polyarthritis, multiple sclerosis, graft-versus-host reactions, juvenile-onset diabetes, Hashimoto's thyroiditis, Grave's disease (Basedow disease), systemic Lupus erythematodes (SLE), Sjogren's syndrome, pernicious anaemia and chronic active (= lupoid) hepatitis;~~

~~(2) for use in transplantation medicine; and~~

~~(3) for the therapy of mitochondrial diseases selected from the group consisting of Parkinson syndrome, Alzheimer's disease, Chorea Huntington disease, retinopathia pigrnentosa or forms of mitochondrial encephalomyopathy; as well as (4) for the therapy of NF-kappaB mediated diseases selected from the group consisting of progressive systemic sclerodermia, osteochondritis syphilitica (Wegener's disease), cutis marmorata (livedo reticularis), Behcet disease, panarteriitis, colitis ulcerosa, vasculitis, osteoarthritis, gout, arteriosclerosis, Reiter's disease, pulmonary granulomatosis, types of encephalitis, endotoxic shock (septic-toxic shock), sepsis, pneumonia, encephalomyelitis, anorexia nervosa, hepatitis (acute hepatitis, chronic hepatitis, toxic hepatitis, alcohol-induced hepatitis, viral hepatitis, jaundice, liver insufficiency and~~

~~cytomegaloviral hepatitis), Rennert T-lymphomatosis, mesangial nephritis, post-angioplastic restenosis, reperfusion syndrome, cytomegaloviral retinopathy, adenoviral diseases such as adenoviral colds, adenoviral pharyngoconjunctival fever and adenoviral ophthalmia, AIDS, Guillain-Barré syndrome, post-herpetic or post-zoster neuralgia, inflammatory demyelinising polyneuropathy, mononeuropathia multiplex, mucoviscidosis, Bechterew's disease, Barett oesophagus, EBV (Epstein-Barr virus) infection, cardiac remodeling, interstitial cystitis, diabetes mellitus type 11, radiosensitisation of malignant tumours, multi-resistance of malignant cells to chemotherapeutic agents (multipharmaceutical preparation resistance in chemotherapy), granuloma annulare and cancers such as mamma carcinoma, colon carcinoma, melanoma, primary liver cell carcinoma, adenocarcinoma, kaposi's sarcoma, prostate carcinoma, leukaemia such as acute myeloid leukaemia, multiple myeloma (plasmocytoma), Burkitt lymphoma and Castleman tumour.~~

27. (New) A method of treating an autoimmune disease comprising administering a pharmaceutical preparation according to any one of claims 20 to 24.

28. (New) A method of treating host-versus-graft reactions comprising administering a pharmaceutical preparation according to any one of claims 20 to 24.

29. (New) A method for treating mitochondrial diseases comprising administering a pharmaceutical preparation according to any one of claims 20 to 24.

30. (New) A pharmaceutical preparation according to claim 23, wherein said nano-particles, micro-pellets or micro-tablets are filled in sachets or capsules.

31. (New) A method for preparing a pharmaceutical preparation according to claim 26 further comprising subjecting the admixture to tabletting, direct compression, melt methods, or spray drying to form tablets, granulates, nano-particles, nano-capsules, micro-capsules, micro-tablets, pellets, or powders.

32. (New) A method for preparing a pharmaceutical preparation according to claim 31, wherein said tablets, granulates, nano-particles, nano-capsules, micro-capsules, micro-tablets, pellets, or powders are enterically coated.

33. (New) A method for preparing a pharmaceutical preparation according to claim 31, wherein said nano-particles, nano-capsules, micro-capsules, micro-tablets, pellets, or powders are put into capsules.

34. (New) An oligomer according to claim 5, wherein n is 2 or 3, R_1 is hydrogen, R_2 is an alcohol radical ($-OR_5$), and R_5 is a C_{1-24} alkyl radical.

35. (New) An oligomer according to claim 5, wherein n is 3, R_1 is hydrogen, R_2 is an amine radical ($-NR_3R_4$).

36. (New) An oligomer according to claim 5, wherein n is 2 or 3, R_1 and R_2 are independently chosen from amine radicals ($-NR_3R_4$).

37. (New) An oligomer according to claim 5, wherein n is 2 or 3, R_1 is an alcohol radical ($-OR_5$), R_5 is a C_{1-24} alkyl radical, and R_2 is an amine radical ($-NR_3R_4$).